UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
WAI, ERIC CHARLES

ART UNIT	PAPER NUMBER
2195	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	10/783,625	CZAJKOWSKI ET AL.
Office Action Summary	Examiner	Art Unit	
	ERIC C. WAI	2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _22 June 2008_.

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-45_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-45_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-45 are presented for examination.

Claim Rejections - 35 USC § 101

2.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3.   Claims 24-29 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The current focus of the Patent Office in regard to statutory inventions under 35 U.S.C. § 101 for method claims and claims that recite a judicial exception (software) is that the claimed invention recite a practical application. Practical application can be provided by a physical transformation or a useful, concrete and tangible result.

4.   Claims 24-29 are also rejected for claiming a data structure comprising a mere arrangement of data (i.e. nonfunctional descriptive material). When nonfunctional descriptive material is recorded on some computer-readable medium, in a computer or on an electromagnetic carrier signal, it is not statutory since no requisite functionality is present to satisfy the practical application requirement. Merely claiming nonfunctional descriptive material, i.e., abstract ideas, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make it statutory (See MPEP 2106.01).

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 1-3, 11-23, and 42-45 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Jones et al. (US Pat No. 6,003,061).

7.   Regarding claim 1, Jones teaches a computer-readable storage medium storing

program instructions, computer-executable to perform operations comprising:

creating an association of a computer resource and a resource management

policy for the computer resource (col 5 lines 42-46 and 57-59, wherein each resource is

registered with the local resource planner); and

binding one or more encapsulated computations to the encoding (col 5 lines 39-

41, wherein resources are allocated to activities); and

executing the one or more encapsulated computations in accordance with the

resource management policy (wherein it inherent that the activities are executed).

8.   Jones does not explicitly teach encoding an association. It would have been

obvious to one of ordinary skill in the art at the time of the invention that an association

between the resources and policy is encoded. Encoding is defined as "to put something

into code" (Microsoft Computer Dictionary, 5th Edition, 2002). The skilled artisan would

realize the existence of a relationship between the resource and resource policy in Jones would need to be 'encoded' in some manner in order to exist as Jones is directed to computer software systems.

9.   Regarding claim 2, Jones teaches that the encapsulated computations correspond to a collaborative application (col 4 lines 56-60, wherein distributed systems run collaborative applications).

10.   Regarding claim 3, Jones teaches that an encapsulated computation has a state independent of other encapsulated computations (col 5 lines 23-37).

11.   Regarding claim 11, Jones teaches that binding the one or more encapsulated computations with the encoding comprises indicating to each of the encapsulated computations the encoding (col 5 lines 39-41, wherein the resource planner tells the activity).

12.   Regarding claim 12, Jones teaches that the computer resource includes physical and logical computer resources (col 5 lines 11-23).

13.   Regarding claim 13, it is the computer-implemented method claim of claims 1 and 3 above. Therefore, it is rejected for the same reasons as claims 1 and 3 above.

14.   Regarding claim 14, Jones teaches that the encoding indicates the computer
resource (col 5 lines 39-41).

15.   Regarding claim 15, Jones teaches that the encoding further indicates a set of
one or more policy actions corresponding to the resource management policy, wherein
execution of the set of policy actions causes a policy decision to be generated for the
computer resource (col 5 lines 56-59).

16.   Regarding claim 16, Jones teaches that a dispenser isolate retrieves the set of
policy actions from the encoding and executes the set of policy actions to invoke a
policy imposing isolate (col 5 lines 56-59, wherein a resource planner program does the
execution).

17.   Regarding claim 17, Jones teaches that the encoding also indicates availability of
the computer resource (col 5 lines 56-59, wherein availability is determined in view of
pending reservations).

18.   Regarding claim 18, Jones teaches that the encoding also indicates a reservation
on the computer resource (col 5 lines 53-55).

19.   Regarding claims 19-20, Jones does not explicitly teach that the resource
management policy is defined by a policy imposing isolate that installs the resource
management policy in the encoding.

20.   Well It is well known in the art that operating systems and runtime environments
such as Java have processes that perform resource management. It would have been
obvious to one of ordinary skill in the art at the time of the invention that a process or
thread that manages resources would impose the management policies.

21.   Regarding claim 21, Jones teaches indicating the encoding in a registry of
resource management policy-computer resource association encodings (col 5 lines 42-
43, wherein resources are registered, therefore a registry exists).

22.   Regarding claim 22, Jones does not teach indicating the computer resource with
generic attributes that at least include disposable, revocable, reservable, and bounded.

23.   However it would have been obvious to one of ordinary skill in the art at the time
of the invention to modify Jones to indicate the computer resource with generic
attributes. One would be motivated by the desire to perform resource management
more effectively during allocation.

24.   Regarding claim 23, it is the method claim of claim 2 above. Therefor it is
rejected for the same reasons as claim 2 above.

25.   Regarding claim 42, Jones teaches an apparatus according to claims 1 and 3

above, further comprising:

        a memory (col 5 line 13).

26.   Regarding claim 43, Jones teaches that the resource management policy

comprises one or more policy actions that provide policy decisions to computer

resource requests (col 5 lines 56-59).

27.   Regarding claim 44, Jones does not teach that the resource management policy

further comprises triggers that gate execution of policy actions.

28.   It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify Jones to include triggers. It is well known in the art that management

policies comprise rules based on inputs that allow for determinations to be made on

those inputs.

29.   Regarding claim 45, Jones teaches means for indicating usage of the computer

resource (col 5 lines 56-59, wherein availability is determined in view of pending

reservations).

30.   Claims 4-10, and 30-41 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Jones et al. (US Pat No. 6,003,061) in view of Back et al. ("processes

in KaffeOS: Isolation, Resource Management, and Sharing in Java", 4th OSDI, Sand

Diego, CA, 2000, 14 pages).

31.   Back et al. was disclosed on IDS dated 04/12/2004.

32.   Regarding claim 4, Jones does not explicitly teach that encoding the association

includes instantiating a resource domain structure, wherein the resource domain

structure indicates a computer resource.

33.   Back teaches that the use of namespaces in Java allow processes to share or

isolate resources (pg 6 "3.2 Namespaces"). It would have been obvious to one of

ordinary skill in the art that the using namespaces in Java is equivalent to a resource

domain structure since the resources are separated or shared depending on the

situation.

34.   Regarding claim 5, Jones teaches that the encoding further indicates a set of one

or more policy actions for the resource, the set of policy actions corresponding to the

resource management policy (col 5 lines 56-59).

35.   Regarding claim 6, Jones and Back do not explicitly teach that a policy imposing

isolate installs the set of policy actions in the resource domain structure.

36.   It is well known in the art that operating systems and runtime environments such

as Java have processes that perform resource management. It would have been

obvious to one of ordinary skill in the art at the time of the invention that a process or

thread that manages resources would impose the management policies.

37.   Regarding claim 7, Jones and back do not teach that the resource domain

structure also indicates a set of one or more triggers for the resource, wherein the set of

triggers correspond to respective ones of the set of policy actions.

38.   It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify Jones to include triggers. It is well known in the art that management

policies comprise rules based on inputs that allow for determinations to be made on

those inputs.

39.   Regarding claim 8, Jones teaches that the resource domain structure also

indicates a reservation on the resource (col 5 lines 53-55).

40.   Regarding claim 9, Jones teaches that binding the one or more encapsulated

computations with the encoding comprises indicating in a registry each of the

encapsulated computations and the encoding (col 5 lines 42-43, wherein resources are

registered, therefore a registry exists).

41.   Regarding claim 10, Jones teaches that a dispenser retrieves the policy actions

from the resource domain structure and executes the policy actions to handle a

resource request for the resource, wherein the dispenser is an isolate that handles

requests for the resource (col 5 lines 56-59, wherein a resource planner performs such actions).

42.   Regarding claim 30, Jones teaches a computer-readable storage medium storing program instructions executable to perform operations according to claim 1 above.

43.   Jones does not explicitly teach preventing the binding of two encapsulated computations with the same resource. Jones does imply that different activities can be allocated to different local resource in view of pending reservations (col 5 lines 53-59). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Jones to explicitly teach preventing the binding of activities to a particular resource. The skilled artisan would realize that Jones' teachings allow for activities to be allocated to different resources if a particular resource is unavailable.

44.   Jones also does not explicitly teach the use of resource domains. Back teaches that the use of namespaces in Java allow processes to share or isolate resources (pg 6 "3.2 Namespaces"). It would have been obvious to one of ordinary skill in the art that the using namespaces in Java is equivalent to a resource domain structure since the resources are separated or shared depending on the situation.

45.   Regarding claim 31, Jones and Back teach that the resource domain structures identify their resource domain and indicate resources and associated resource management policies (Jones col 5 lines 56-59 and Back pg 6 "3.2 Namespaces").

46.   Regarding claim 32, Jones and Back do not teach that each of the resource domain structures indicate generic attributes of their computer resource that at least include disposable, revocable, reservable, and bounded.

47.   However it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Jones and Back to indicate the computer resource with generic attributes. One would be motivated by the desire to perform resource management more effectively during allocation.

48.   Regarding claim 33, Jones teaches that the resource domain structures indicate usage of their computer resource (col 5 lines 39-46).

49.   Regarding claim 34, Jones teaches that the resource domain structures indicate reservations on their corresponding computer resource (col 5 lines 56-59).

50.   Regarding claim 35, Jones teaches the computer-readable storage medium comprising program instructions according to claims 1 and 3 above.

51.   : Jones does not explicitly teach the use of resource domains. Back teaches that the use of namespaces in Java allow processes to share or isolate resources (pg 6 "3.2 Namespaces"). It would have been obvious to one of ordinary skill in the art that the using namespaces in Java is equivalent to a resource domain structure since the resources are separated or shared depending on the situation.

52.

53.   Regarding claim 36, Jones teaches that the resource domain class definition provides a routine for determining current usage corresponding to an instance of the resource domain class (col 5 lines 22-23, "resource accounting").

54.   Regarding claim 37, Jones does not explicitly teach one or more routines for unconsuming computer resources.

55.   However, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Jones to teach methods for free up the computer resources. One would be motivated by the desire to allow other activities utilize such resources if they are no longer being used.

56.   Regarding claim 38, Jones teaches one or more routines for attempting to consume a given amount of a computer resource, with the possibility of success or failure (col 5 lines 44-46).

57.   Regarding claim 39, Jones teaches one or more routines for indicating computations bound to a given resource domain class instance (col 5 lines 59-60).

58.   Regarding claim 40, Jones does not teach a sequence of instructions to regulate association of computations with instances of the resource domain class, wherein each instance of the resource domain class indicates different resources.

59.   It is well known in the art that Java is an object-orientated program that uses

class definitions to construct multiple instances of an object. It would have been obvious

to one of ordinary skill in the art at the time of the invention to include that each instance

of the resource domain class indicates a different resource.

60.   Regarding claim 41, Jones teaches a sequence of instructions to associate

resource domain class instances with dispensers that handle resource requests

separately from implementation of the resource (col 5 lines 38-41, wherein resource

planners are not involved with the implementation of the resource).

61.   Claims 24-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Karch (US Pat No. 7,096,219).

62.   Regarding claim 24, Karch does not teach a data structure encoded on one or

more machine-readable media, the data structure comprising:

        a first field to indicate a computer resource; a second field to indicate a resource

management policy; and a third field to indicate availability of the computer resource.

63.   Karch does teach using a resource usage analysis tool to perform reporting on

resources, availability, and policies (col 4 lines 5-12). It would have been obvious to one

of ordinary skill in the art at the time of the invention that Karch would also include a

data structure to include all the fields. One would be motivated by the desire to allow for

simplified reporting as provided by Karch (col 4 lines 15-16) and performance

enhancements (col 4 lines 17-20).

64.   Regarding claim 25, Karch does not teach comprising a fourth field to indicate an

identifier to identify an association between a resource indicated in the first field and a

resource management policy indicated in the second field.

65.   Karch does teach building aggregate tables and the addition of indexes can be

performed (col 4 lines 17-20). It would have been obvious to one of ordinary skill to

modify Karch to include a forth field to identify associations. One would be motivated to

try to include such as association since it leads to predictable results.

66.   Regarding claim 26, Karch does not teach further comprising a fourth field to

indicate computer resource usage by a set of one or more encapsulated computations

bound to the data structure.

67.   Karch does teach the capability to report resource usage (col 4 lines 5-12). It

would have been obvious to one of ordinary skill to modify Karch to include a fourth field

to indicate computer usage. One would be motivated by the desire to track using

resource usage on a per thread basis.

68.   Regarding claim 27, Karch does not teach that the first field indicates a computer

resource's attributes.

69.   It would have been obvious to one of ordinary skill to modify Karch to uniquely

identify each resource. It is well known in the art that attributes identify resources.

70.   Regarding claim 28, Karch does not teach that the computer resource's attributes

at least include disposable, revocable, reservable, and bounded.

71.   However it would have been obvious to one of ordinary skill in the art at the time

of the invention to modify Karch to indicate the computer resource with generic

attributes. One would be motivated by the desire to perform resource management

more effectively during allocation.

72.   Regarding claim 29, Karch does not teach further comprising a fourth field to

indicate a reservation of the computer resource.

73.   Karch does teach the capability to report resource usage (col 4 lines 5-12). It

would have been obvious to one of ordinary skill to modify Karch to include a fourth field

to indicate computer usage or reservation. One would be motivated by the desire to

track using resource usage on a per thread basis.

Response to Arguments

74.   Applicant's arguments with respect to claims 1, 13, 30, 35 and 42 have been

considered but are moot in view of the new ground(s) of rejection.

75.   Applicant's arguments filed 06/22/2008 regarding claim 24 have been fully
considered but they are not persuasive.

76.   Regarding claim 24, Applicant argues on pgs 16-17 of Remarks:

       "This passage, however, does not describe reporting on policies (as suggested
by the Examiner), but reporting and analysis of data management system resources
and defining rules that control access to those resources. It also does not describe
reporting on the availability of resources, as suggested by the Examiner, but describes
reporting on actual usage of the resources. Therefore, Karch does not teach a resource
usage analysis tool that reports on the three elements recited in claim 24...
Furthermore, Applicants' claim has nothing to do with reporting of computer resource
usage. Therefore, the Examiner's reason to modify Karch is not commensurate with the
feature he is attempting to include in Karch to result in the claimed invention."

77.   Examiner disagrees. In response to applicant's argument that Karch does not
describe reporting on the availability of resources, a recitation of the intended use of the
claimed invention must result in a structural difference between the claimed invention
and the prior art in order to patentably distinguish the claimed invention from the prior
art. If the prior art structure is capable of performing the intended use, then it meets the
claim.

Conclusion

78.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

79.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to ERIC C. WAI whose telephone number is (571)270-

1012. The examiner can normally be reached on Mon-Fri, 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Meng - Ai An can be reached on 571-272-3756. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Meng-Ai An/   /Eric C Wai/
Supervisory Patent Examiner, Art Unit 2195   Examiner, Art Unit 2195